COMMENTS ON DEQ'S PROPOSED CHLOROPHYLL-*A* STANDARD FOR THE JAMES RIVER

SUMMARY

VAMWA scientists have been involved with the efforts to derive chlorophyll-*a* standards since the criteria derivation process was initiated by the Chesapeake Bay Program in 2000. Over this time, VAMWA has put a great deal of effort into evaluating various methods for deriving and expressing chlorophyll-*a* standards, with a sincere desire to identify appropriate methods if possible. Chlorophyll-*a* has been of special interest to VAMWA from the beginning of the process, due to the scientific challenges of quantitatively linking chlorophyll-*a* to designated uses in a manner that is not simply redundant of dissolved oxygen and water clarity standards.

Throughout this process VAMWA's major objective has been to ensure that—if and when chlorophyll-*a* standards were proposed—they represent scientifically-defensible regulations with tangible benefits to the environment and the public. Unfortunately, Virginia's proposed chlorophyll-*a* standards for the James River are deeply and fatally flawed on many levels, and have validated all of VAMWA's previously-expressed concerns about how a poorly-fashioned chlorophyll-*a* standard could lead to mismanagement of water quality and a waste of public resources. Major shortcomings of the regulation include the following:

- The proposed chlorophyll-*a* criteria are scientifically invalid, and are not based on demonstration of benefits to aquatic life or the public.
- Regulators have attempted to justify the proposed standard by numerous unsubstantiated and questionable claims regarding the impacts of chlorophyll-*a* on living resources of the James River.
- The proposed chlorophyll-*a* criteria could actually harm living resources such as oysters, striped bass, largemouth bass, and menhaden. These potential impacts have not been evaluated by regulators.
- The proposed criteria are based on a highly subjective and poorly defined interpretation of the algal "balance" concept, without consideration of overall ecological impacts.
- Analysis of monitoring data demonstrates that much higher—and less burdensome—chlorophyll-*a* criteria would provide equivalent algal "balance".
- The proposed numbers were heavily influenced by a pre-determined load allocation, the reverse of the process intended by the Clean Water Act.
- More scientifically-defensible methods that point to alternate chlorophyll-*a* criteria for the tidal fresh water region were not utilized.
- Regulators have not performed an analysis of alternatives to the proposed criteria, some of which are likely to represent superior environmental protection with much lower socioeconomic impacts.